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7590 04/14/2009 HEWLETT-PACKARD COMPANY Intellectual Property Administration P.O. Box 272400 Fort Collins, CO 80527-2400			EXAMINER CHANDLER, SARA M	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/903,075  
Filing Date: July 10, 2001  
Appellant(s): GULER ET AL.

\_\_\_\_\_  
John P. Wagner, Jr.  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 02/18/09 appealing from the Office action mailed 09/15/08.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

**WITHDRAWN REJECTIONS**

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

1. Claim Rejections - 35 USC § 101 based on the rationales of: (a). Judicial Exception and (b) Practical Application. [Note: Claim Rejections - 35 USC § 101 based on the rationale of an improper process claim is maintained.]

2. Claims 1,3,4,6,7,8,9,11,12,14,15,16,17,19,20,22,23 and 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Seymour, US Pat. No. 6,871,190.

3. Claims 2,5,10,13,18 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Seymour, U.S. Patent No. 6,871,190 in view of Shoham, U.S. Patent No. 6,285,989.

### **NEW GROUND(S) OF REJECTION**

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claim 9** is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

- Software per se

Claim 9 recites elements which are computer software programs per se. See discussion in applicant's specification which states:

Further, it is appreciated that the steps of these processes may be performed by software or hardware or any combination of software and hardware. (Applicant's Specification, pg. 12, 07/10/01).

In one embodiment, the automated decision support system 10 is a software system implemented in a computer system. Alternatively, the automated decision support system 10 can be implemented by hardware or firmware. (Applicant's Specification, pg. 12, 07/10/01)

Claim 9 only recites the software programs termed as respective system elements (e.g., "a market-characteristic-based-on-historical-auctions-selector ..... " etc.). These elements represent code without the associated structure required of the system claim.

Software program per se represent data structure without being connected to a processor or server does not fit into any of the four statutory classes (process, apparatus, article of manufacture and composition of matter) and therefore is not a statutory subject matter under 35 USC 101. (MPEP 2106 Patent Subject Matter Eligibility [R-6])

#### **(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

#### **(8) Evidence Relied Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

#### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

##### ***Claim Interpretation***

1. In determining patentability of an invention over the prior art, all claim limitations have been considered and interpreted as broadly as their terms reasonably allow. See MPEP § 2111.

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Pruter*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). See MPEP § 2111.

2. All claim limitations have been considered. Additionally, all words in the claims have been considered in judging the patentability of the claims against the prior art. See MPEP 2106 II C. The following language is interpreted as not further limiting the scope of the claimed invention. See MPEP 2106 II C.

Language in a method claim that states only the intended use or intended result, but the expression does not result in a manipulative difference in the steps of the claim. Language in a system claim that states only the intended use or intended result, but does not result in a structural difference between the claimed invention and the prior art. In other words, if the prior art structure is capable of performing the intended use, then it meets the claim.

Claim limitations that contain statement(s) such as "*if, may, might, can could*", as optional language. As matter of linguistic precision, optional claim elements do not narrow claim limitations, since they can always be omitted.

Claim limitations that contain statement(s) such as "*wherein, whereby*", that fail to further define the steps or acts to be performed in method claims or the discrete physical structure required of system claims.

USPTO personnel should begin claim analysis by identifying and evaluating each claim limitation. For processes, the claim limitations will define steps or acts to be performed. For products, the claim limitations will define discrete physical structures or materials. Product claims are claims that are directed to either machines, manufactures or compositions of matter. See MPEP § 2106 II C.

The subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The

following are examples of language that may raise a question as to the limiting effect of the language in a claim:

- (A) statements of intended use or field of use,
- (B) "adapted to" or "adapted for" clauses,
- (C) "wherein" clauses, or
- (D) "whereby" clauses.

See MPEP § 2106 II C.

3. Independent claims are examined together, since they are not patentable distinct. If applicant expressly states on the record that two or more independent and distinct inventions are claimed in a single application, the Examiner may require the applicant to elect an invention to which the claims will be restricted.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

**Claims 1 and 9** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

- Process Claim

The method of claim 1 is not tied to any machine such as a computer system. The evaluation of the first and second outcome of the market is arbitrary. All the steps in the process for determining the auction format for said market can be done by a human operator. Lastly, since the claim invention does not require any quantifiable and measurable standards for its calculation any potential result is vulnerable to the subjective judgement of the human operator and is thus not predictable or repeatable.

It is thus clear that the present statute does not allow patents to be issued on particular business systems - such as a particular type of arbitration - that depend entirely on the use of mental processes. In other words, the patent statute does not allow patents on particular systems that depend for their operation on human intelligence alone, a field of endeavor that both the framers and Congress intended to be beyond the reach of patentable subject matter. Thus, it is established that the application of human intelligence to the solution of practical problems is not in and of itself patentable. *Comiskey*, 499 F.3d 1365.

However, mental processes—or processes of human thinking – standing alone are not patentable even if they have practical application. The Supreme Court has stated that “[p]henomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.

- Software per se

Claim 9 recites elements which are computer software programs per se. See discussion in applicant's specification which states:

Further, it is appreciated that the steps of these processes may be performed by software or hardware or any combination of software and hardware. (Applicant's Specification, pg. 12, 07/10/01).

In one embodiment, the automated decision support system 10 is a software system implemented in a computer system. Alternatively, the automated decision support system 10 can be implemented by hardware or firmware. (Applicant's Specification, pg. 12, 07/10/01)

Claim 9 only recites the software programs termed as respective system elements (e.g., “a market-characteristic-based-on-historical-auctions-selector .....” etc.). These elements represent code without the associated structure required of the system claim.

Software program per se represent data structure without being connected to a processor or server does not fit into any of the four statutory classes (process,



apparatus, article of manufacture and composition of matter) and therefore is not a statutory subject matter under 35 USC 101. (MPEP 2106 Patent Subject Matter Eligibility [R-6])

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

**Claims 1-24** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

**Re Claims 1,9 and 17:**

The claimed invention recites:

selecting a relevant bidding model that specifies past bidding behavior as a function of information held privately by a bidder, that is determined based at least in part on said historical auctions data, and said characteristics of said market based on segments of said historical auctions related to a specified item;

Applicants specification recites:

A bidding model specifies a bidding behavior pattern. It is a function of auction characteristics or procedure of the corresponding auction. It is also a function of the market structure of the auction. (Applicant's Specification, pg. 18, line 20+ - col. 19, line 1)

Which identifies the required elements used for selecting the bidding model?

Dependent claims are also rejected based on the same rationale as the claims from which they depend.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-24** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Re Claims 1,9 and 17:** The meaning of characteristics of said market is indefinite. What are the characteristics of the market? E.g., Could just saying the market is an auction be sufficient. If it is something more, what is it?

Re Claims 1,9 and 17: The meaning of bidding model is indefinite. What is the bidding model? What elements are required to select it?

Re Claims 1,9 and 17: The meaning of estimated structure is indefinite. How is it selected? How does the estimated structure tie in with the other claim limitations? E.g., The specification says that a collection of variables are required to estimate the structure of the market however this is never addressed in the claims.

"Market structure" is intended to mean a collection of variables that describe the factors that may affect the bidding behavior of bidders. A market structure is characterized by two sets of variables: a first set of variables collectively describes the auction "environment," and a second set of variables collectively describes the auction "mechanism." (Applicant's Specification, pg. 25, lines 5-10)

Re 1,9 and 17: The meaning of bidding behavior is indefinite. How can specifying bidding behavior be a requirement of the bidding model (as claimed)? Yet

the bidding model is used to predict bidding behavior (as claimed)? Which comes first? Also, are specified and predicted bidding behaviors different in some way?

Re 1,9 and 17: What are the outcomes to be expected? How are they used to make a determination? Are they evaluated from a bidder or seller perspective? E.g., Are you looking for the highest or lowest price? Once you have this information, how do you know what is preferred?

The term "relevant bidding model" in claims 1,9 and 17 is a relative term which renders the claim indefinite. The term "relevant" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In summation, claims 1,9 and 17 indefinite because: a) The scope of the claims are unclear. Terms such as "structure", "characteristics of said market" are broad, abstract concepts. b) There is insufficient correlation or interrelationship among the steps. c) There is no requirement of the claim to produce a result (i.e., the claim has not outputted a result). d) The evaluating step is unclear. How does the evaluating occur (i.e., evaluating mean, variance etc.)? e) The claims recite the limitation "relevant bidding model" it is unclear what is meant by relevant.

**Re Claims 9-16:** The claim is indefinite because the preamble recites a system claim but the structural components of the system used to carry out the claimed invention are unclear. Are the "selectors" software or hardware? The specification

refers to "modules" which is often used to refer to software and software per se is not patent eligible subject matter.

The following suggested language would indicate that the system is programmed to do those things.

Suggested language:

a processor interconnected with said bus, wherein said processor is programmed to execute a method for determining an auction format for a market, said method comprising the steps of:

**Re Claims 2, 10 and 18:** The claim recites the limitation "first user input." Who is the user (i.e., bidder, seller)? Does it matter?

The claim recites the limitation "auction characteristics data." How is this different than the characteristics of said market?

The term "similar items" in claim 2 is a relative term which renders the claim indefinite. The term "similar" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

**Re Claims 3,11 and 19:** The claim recites the limitation "auction characteristics data." How is this different than the characteristics of said market?

**Re Claims 4,12 and 20:** The claim recites the limitation "unobservable variables." What is this? Variables of what?

The claim recites the limitation "observable bids." What is this? Are these related to the historical bids or are they something different?

The claim recites the limitation "estimated latent structure of said market" What is this? How is it estimated? How is it different than the estimated structure?

**Re Claims 5,13 and 21:** The claim recites "wherein said relevant bidding model has embedded an unknown structure, and wherein said predicting of said first bidding behavior step comprises the steps of:" Is the bidding model a function of the unknown structure also? How is the unknown structure different than the estimated latent structure and the estimated structure?

**Re Claims 6,14 and 22:** The claim recites the limitation "second user input." Who is the user (i.e., bidder, seller)? Does it matter?

The claim recites the limitation "an evaluation criterion." What is this?

The claim recites the limitation "constraint." What is this?

**Re Claims 7,15 and 23:** The claim recites the limitation "third user input." Who is the user (i.e., bidder, seller)? Does it matter?

The claim recites the limitation "descriptive statistics." What is this? How is it descriptive?

Should "said plurality" be -- said plurality of candidate auction formats --?

Dependent claims are further rejected based on the same rationale as the claims from which they depend.

#### **(10) Response to Argument**

Applicant's arguments have been fully considered but they are not persuasive.

#### **101**

Neither the preamble of claim 1 or any of the process steps or acts recited in the

body of claim 1 ever mention a machine, system or apparatus etc. that would suggest that the method claimed is tied to another statutory class. Thus, the process steps or acts recited in the body of the claim may be performed by a human operator alone. Applicant's argument that language such as "stored historical bids data" is indicative of a link to another statutory class is inaccurate. The "historical bids data" could be stored in the memory of the human operator, stored in a file cabinet etc., thus the language is not at all suggestive of some sort of tie to another statutory class such as via a machine, system or apparatus. Even if the "historical bids data" is stored in some sort of machine, system or apparatus, the actively recited steps or acts of the claimed invention may be performed by a human operator alone (e.g., steps or acts of "selecting .....", "predicting .....", "determining ....." ) without relying on the hypothetical machine, system or apparatus to aid in the decision making. Thus, even if the "historical bids data" is stored in some sort of machine, system or apparatus, this is a nominal recitation of another statutory class.

In order for a method to be considered a "process" under 101, a claimed process must either: (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials). *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *In re Bilski*, 88 USPQ2d 1385, 1391 and 1396 (2008).

It is thus clear that the present statute does not allow patents to be issued on particular business systems - such as a particular type of arbitration - that depend entirely on the use of mental processes. In other words, the patent statute does not allow patents on particular systems that depend for their operation on human intelligence alone, a field of endeavor that both the framers and Congress intended to be beyond the reach of patentable subject matter.

Thus, it is established that the application of human intelligence to the solution of practical problems is not in and of itself patentable. *Comiskey*, 499 F.3d 1365.

**112, paragraph 1**

The claimed invention says the relevant bidding model specifies bidding behavior as a function of (a) information held privately by a bidder and (b) characteristics of the market. The specification says the bidding model specifying a bidding behavior is a function of (a) the characteristics of the auction and (b) market structure of the auction. The specification does not support this limitation of the invention as claimed because the requirements of the relevant bidding model that specifies past bidding behavior are different. See citation *supra*.

Even if, as applicant's suggest, there is an alternative definition for what a bidding model is in applicant's specification. The specification would be suggesting multiple, conflicting definitions for what "a bidding model" is and what is required of it to perform the invention. Thus, the claims still contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

**112, paragraph 2**

Regarding claims 1,9 and 17

characteristics of said market

The phrase "characteristics of said market" is abstract. A characteristic of a market could just be that is an auction. Characteristics are the features or attributes that describe something but, these "characteristics" must be capable of quantifiable or

measurable expression. The claimed invention does not provide a way to quantify or measure the "characteristics of said market." Thus, it is unclear how the "characteristics of said market" can be used as part of any calculation used to determine an auction format for the market.

bidding model/relevant bidding model

The claimed invention says the relevant bidding model specifies bidding behavior as a function of (a) information held privately by a bidder and (b) characteristics of the market. The specification says the bidding model specifying a bidding behavior is a function of (a) the characteristics of the auction and (b) market structure of the auction. See citation supra. The meaning of bidding model and its required elements are unclear and indefinite because of the conflicting language in applicant's claims and specification.

The term "relevant" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

estimated structure

The phrase "estimated structure of said market" is abstract. The claims are unclear regarding what an "estimated structure" is and how it can be used quantify or measure factors that affect how bidders' behave. Thus, it is unclear how the "estimated structure" can be used as part of any calculation used to determine an auction format for the market. Note: Similar issue with terms such as "an evaluation criterion" and



"constraint" in claims 6, 14 and 22. Similar issue with terms such as "descriptive statistics" in claims 7, 15 and 23.

The specification says that a collection of variables are required to estimate the structure of the market however this is never addressed in the claims.

"Market structure" is intended to mean a collection of variables that describe the factors that may affect the bidding behavior of bidders. A market structure is characterized by two sets of variables: a first set of variables collectively describes the auction "environment," and a second set of variables collectively describes the auction "mechanism." (Applicant's Specification, pg. 25, lines 5-10)

#### bidding behavior

The meaning of bidding behavior is indefinite because it is: (a) an input and/or required element of the bidding model (e.g., "selecting a relevant bidding model that specifies past bidding behavior .....") and (b) an output of the bidding model (e.g., "predicting a first bidding behavior .....", "predicting at least a second bidding behavior ....."). The claim is unclear regarding how the specified "past bidding behavior" and the predicted "first bidding behavior" and "at least a second bidding behavior" are different.

#### Outcome

The phrase "outcome" is abstract. What the "outcome" would be may be impacted by whether something is evaluated from the bidder or seller perspective. For example, a seller may be interested in the highest price and a bidder in the lowest price. No standard has been given to determine which outcome is preferred.

#### Regarding, claims 9-16

The claim is indefinite because the preamble recites a system claim but the structural components of the system used to carry out the claimed invention are

unclear. The "selectors" may be software or hardware. The specification refers to "modules" which is often used to refer to software and software per se is not patent eligible subject matter.

Regarding claims 2, 10 and 18

The claim recites language such as "first user input" however, it is unclear who the user is (i.e., bidder, seller). The claimed invention and applicant's arguments have stressed the importance of certain users (e.g., bidders etc.) and their actions (e.g., information held privately by a bidder, bidding behavior etc.). Thus, who the user is and what their perspective Note: Similar issue with claims 6, 7, 14, 15, 22 and 23.

The term "similar items" in claim 2 is a relative term which renders the claim indefinite. The term "similar" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Regarding claims 2, 3, 10, 11, 18 and 19

These claims also depend from claims 1, 9 and 17. Claims 1, 9 and 17 recite, "characteristics of said market based at least in part on stored historical bids data that includes data for historical auctions performed in the past for a plurality of bidders," however the distinction between these "characteristics of said market ...." and "auction characteristics data, wherein said auction characteristics data comprise information relating to historical auctions of similar items" is unclear. The claims fail to define or distinguish what these terms mean relative to one another. The claims are using similar but not identical language making it unclear and indefinite regarding whether the same

subject matter is addressed. Note: Regarding claims 4, 12 and 20 Similar issue with the term "observable bids" in claims 4, 12 and 20 and "historical bids" in claims 1, 9 and 17; the term "estimated latent structure of said market" in claims 4, 12 and 20 and "estimated structure" in claims 1, 9 and 17. Regarding claims 5, 13 and 21 Similar issue with the term "observable bids" in claims 4, 12 and 20 and "historical bids" in claims 1, 9 and 17; the term "estimated latent structure of said market" in claims 4, 12 and 20 and "estimated structure" in claims 1, 9 and 17.

#### **(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section (9) above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of 37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

/Sara Chandler/

Examiner, Art Unit 3693

**A Technology Center Director or designee must personally approve the new ground(s) of rejection set forth in section (9) above by signing below:**

/Wynn W. Coggins/

Director, TC 3600

Conferees:

Vincent Millin /vm/

Appeals Practice Specialist

Jagdish Patel

/JAGDISH N PATEL/

Primary Examiner, Art Unit 3693